

No. 736,115.

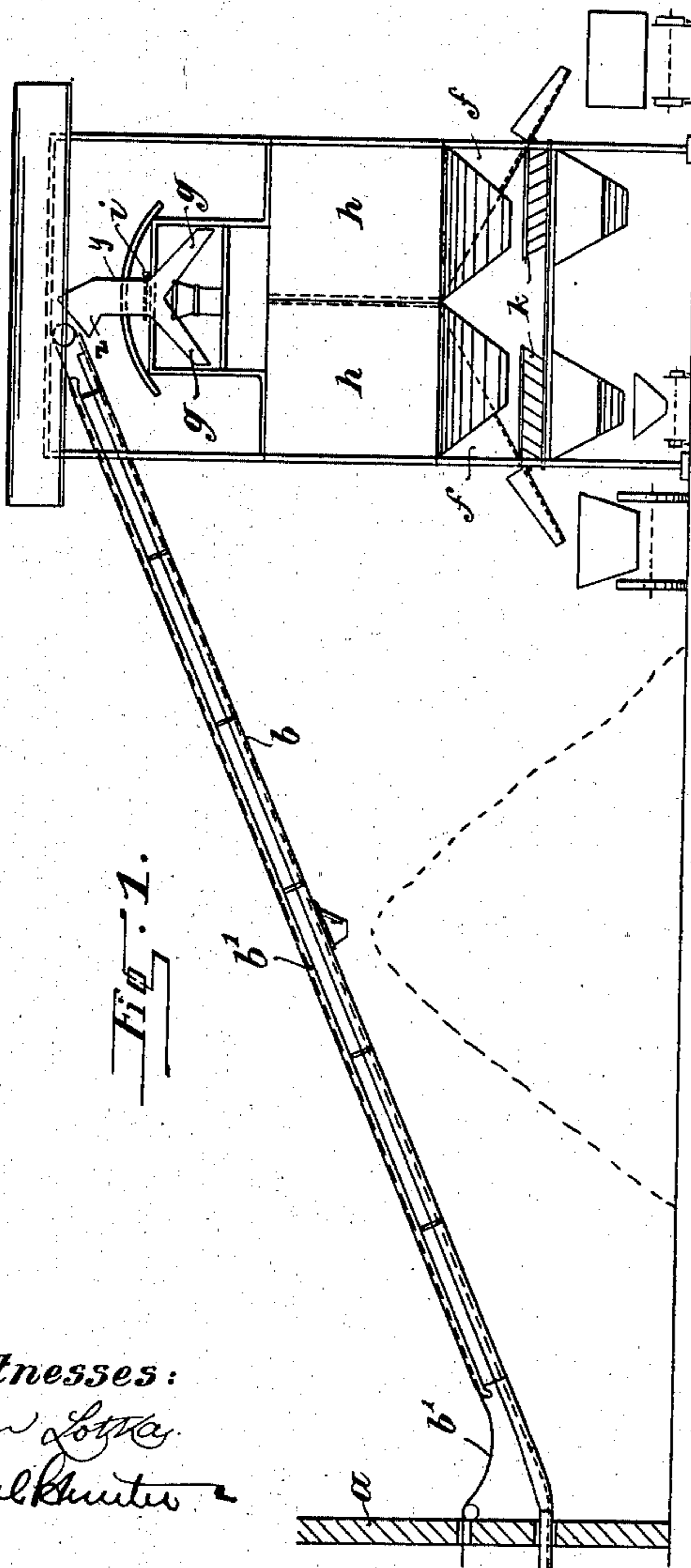
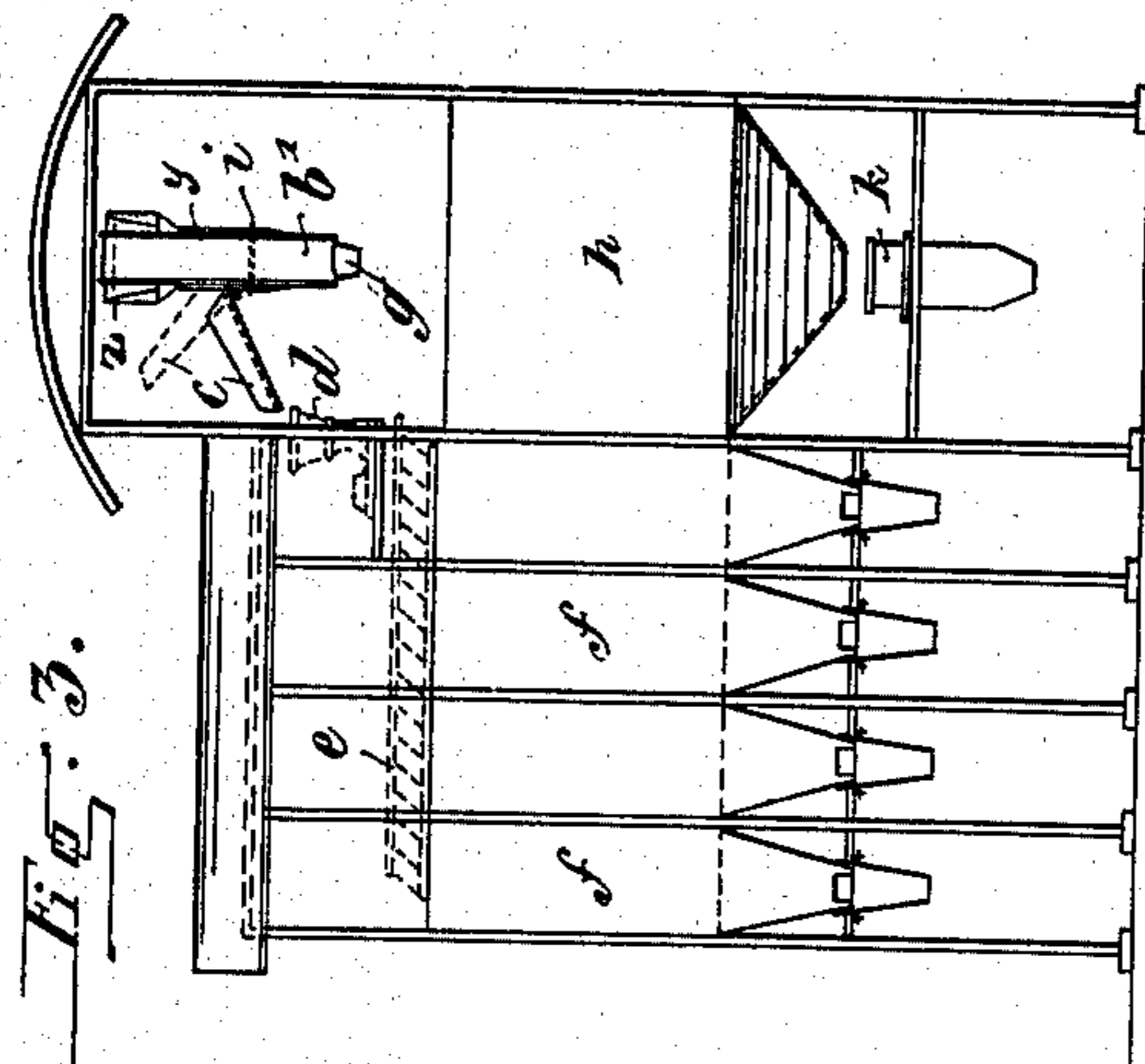
PATENTED AUG. 11, 1903.

E. G. B. KÖRTING.  
COKE CONVEYER.

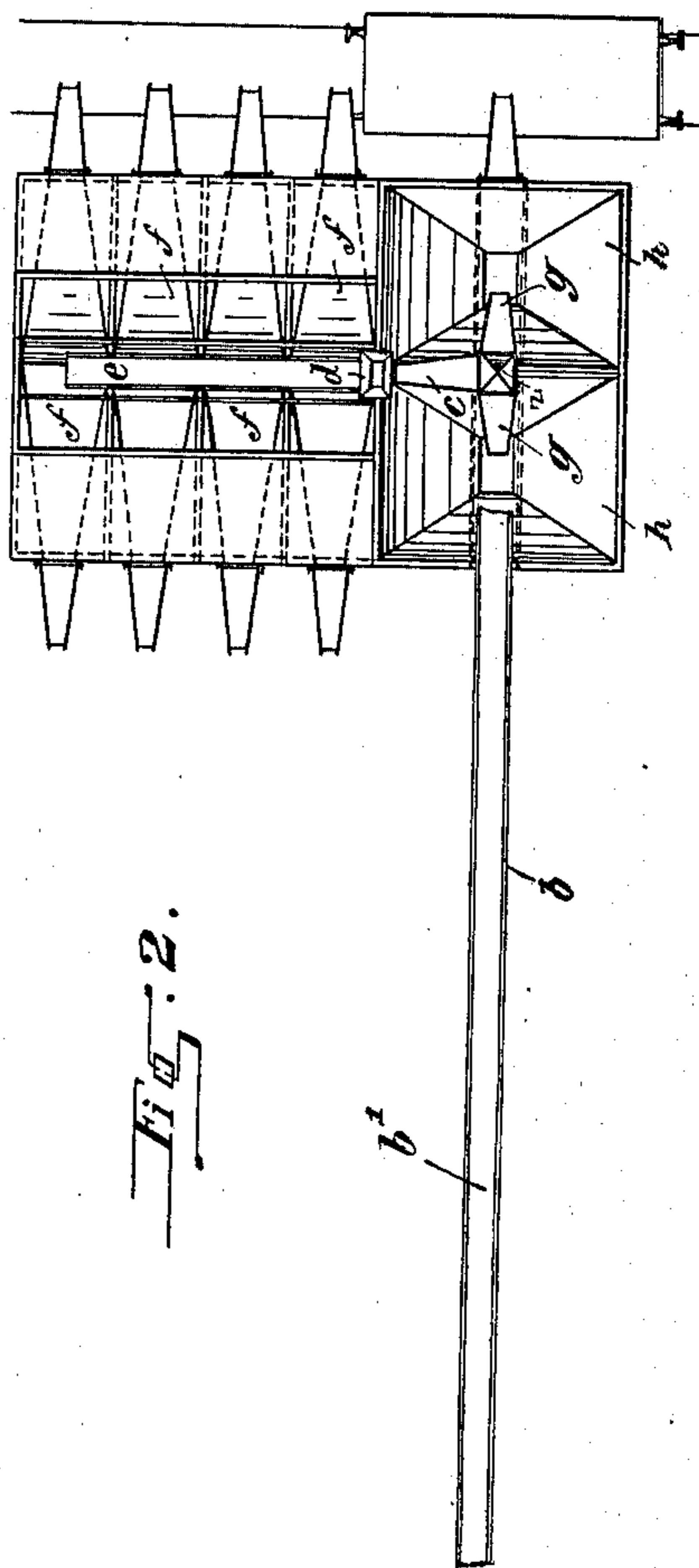
APPLICATION FILED MAR. 13, 1901.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:  
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2 SHEETS—SHEET 2.

Fig. 4.

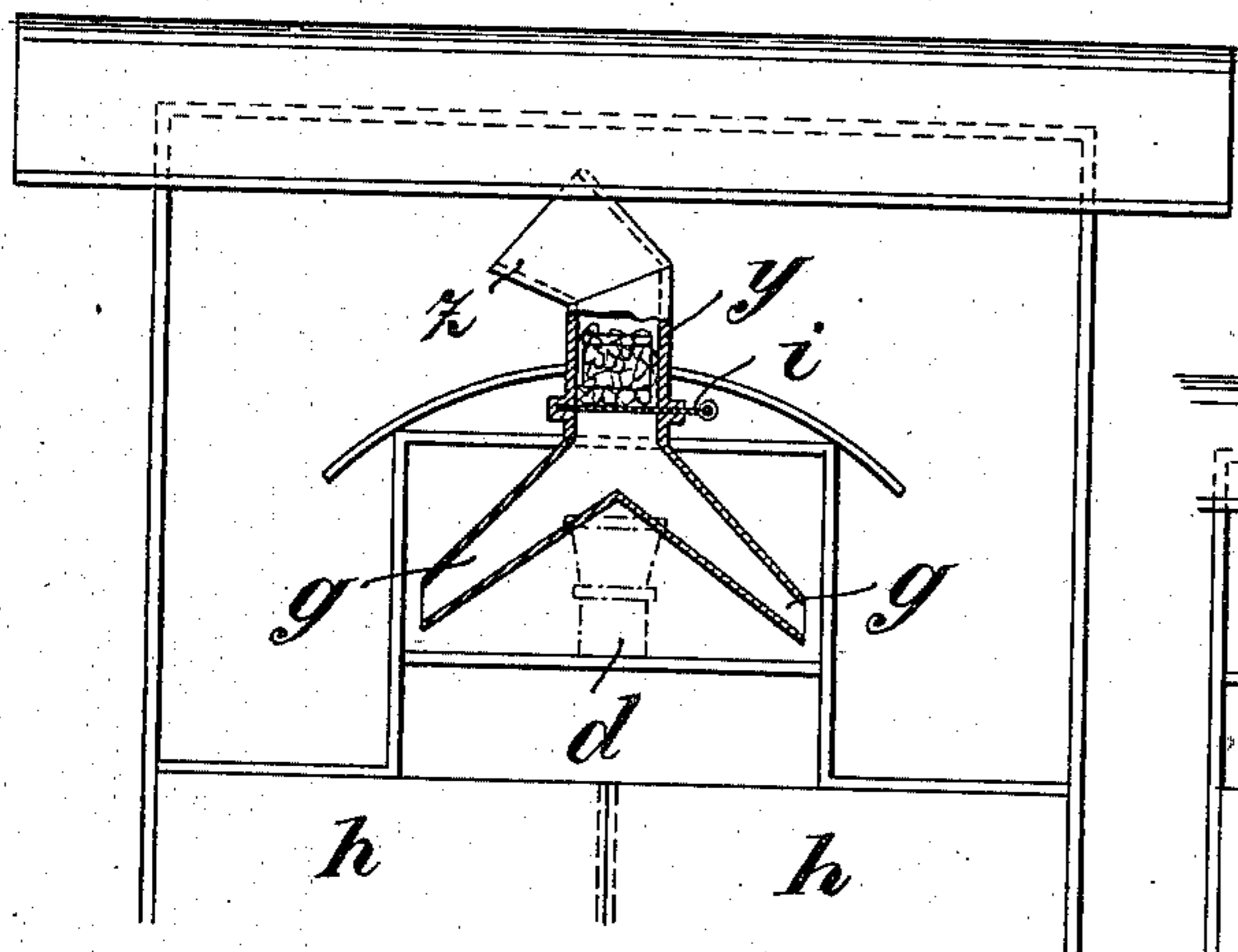


Fig. 5.

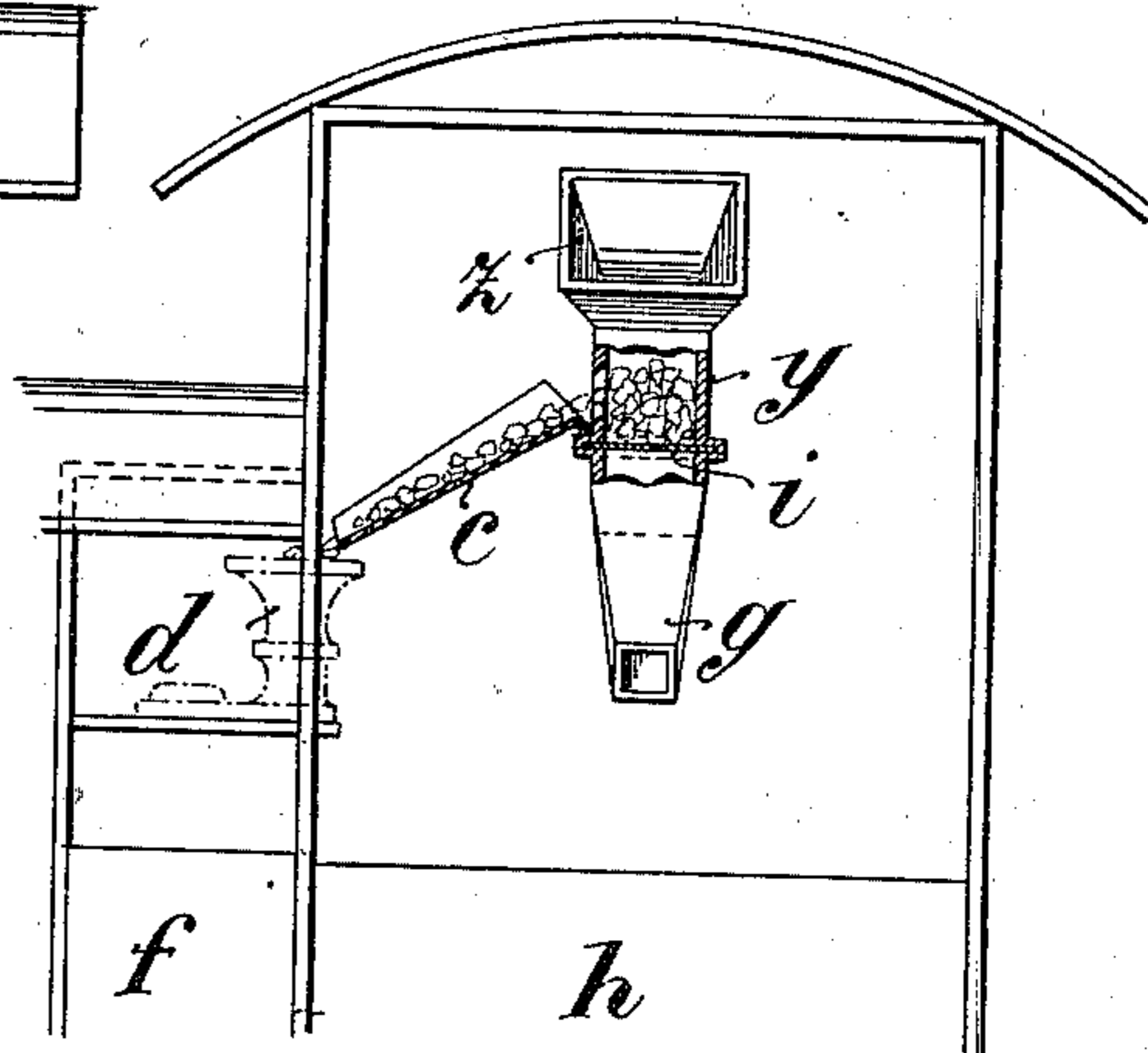


Fig. 6.

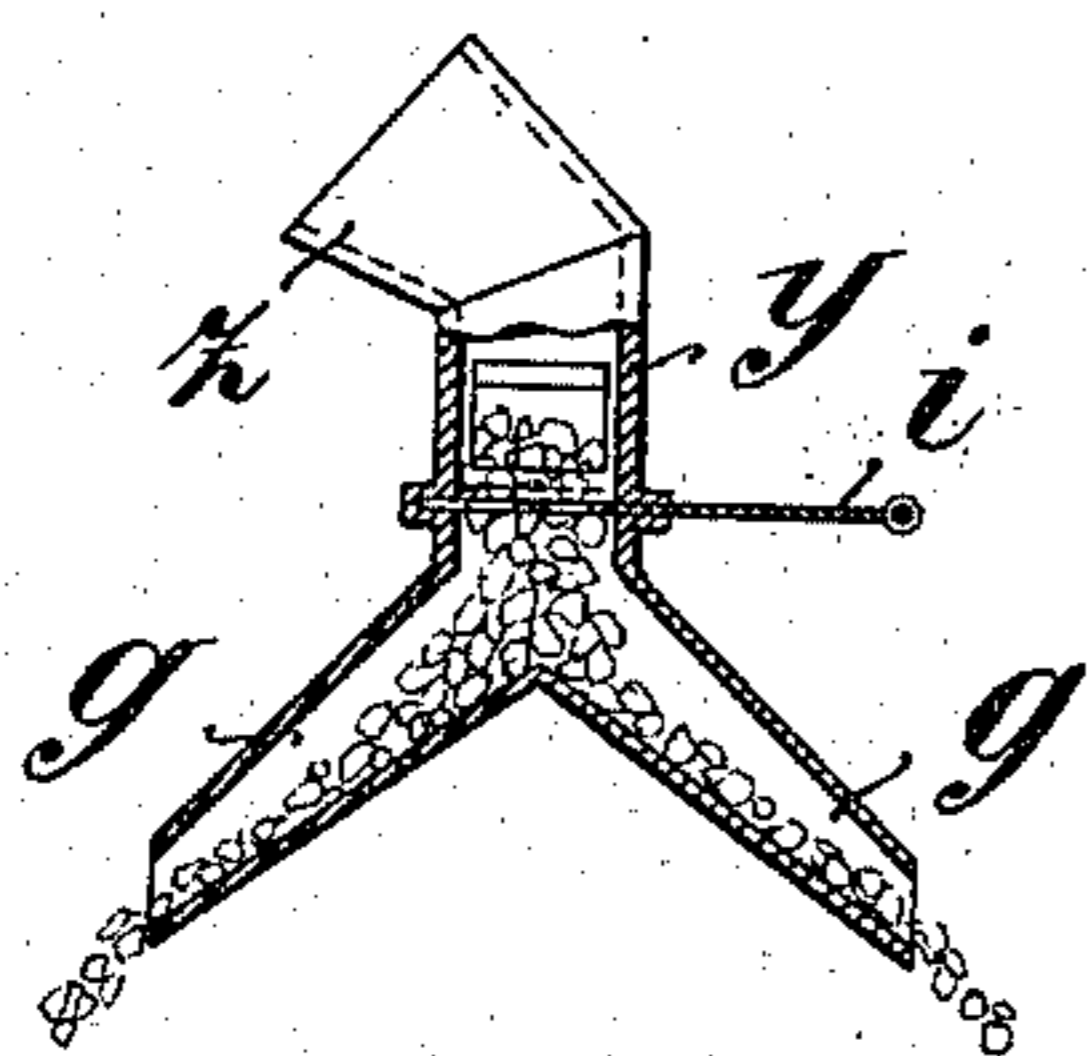
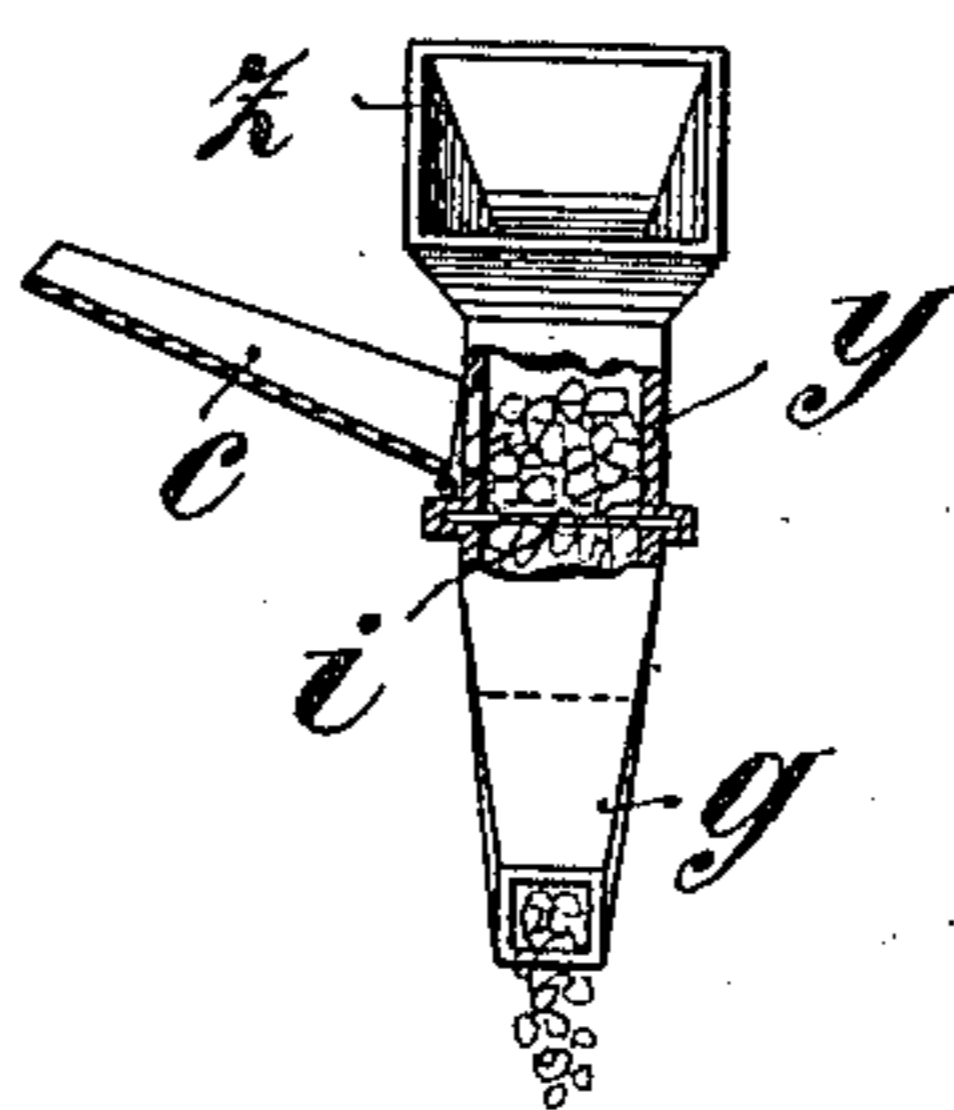


Fig. 7.



Witnesses

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## UNITED STATES PATENT OFFICE.

ERNST GEORG BERNHARD KÖRTING, OF BERLIN, GERMANY.

## COKE-CONVEYER.

SPECIFICATION forming part of Letters Patent No. 736,115, dated August 11, 1903.

Application filed March 13, 1901. Serial No. 50,936. (No model.)

*To all whom it may concern:*

Be it known that I, ERNST GEORG BERNHARD KÖRTING, a subject of the Emperor of Germany, and a resident of Berlin, Germany, have invented a new and Improved Coke-Conveyer, of which the following is a full, clear, and exact description.

My invention relates to plants for handling coke, and particularly for conveying coke to the crushing mechanism, and has for its object to provide means for enabling uncrushed coke to be stored during the night without the loss of energy and in the quality of the coke which is experienced with the ordinary procedure.

It is customary to crush a portion of the coke produced; but on account of the careful attendance the crushing apparatus requires the crushing operation is performed in day-time only, while at night the coke instead of being fed to the crushing apparatus is dumped in the yard. This coke is then in day-time loaded upon trucks or carts as it is—that is, uncrushed—or it is conveyed to the crushing apparatus. This procedure involves considerable additional labor, and, moreover, the coke may suffer by exposure, and the repeated handling of the coke produces a larger amount of fine coke or coke-dust than is produced when the coke is conveyed directly to the crushing apparatus—that is, the quality of the coke is impaired. To avoid this defect, I provide improved means for storing the uncrushed coke during the night in sheltered receptacles, from which the coke may be discharged by gravity, so as to reduce the expense of labor.

The invention will be fully described hereinafter and the features of novelty pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a coke plant provided with my improvements, parts being shown in section. Fig. 2 is a plan thereof, partly in section. Fig. 3 is a side elevation. Fig. 4 is a front elevation, partly in section, of the upper portion of the elevated structure. Fig. 5 is a side elevation of the same, partly in section; and Figs. 6 and 7 are de-

tail views of the hopper and spouts, partly in section.

$a$  is the coking-furnace of any suitable construction, from which an upwardly-inclined trough or channel  $b$  leads to the crushing apparatus  $d$  and to the storage bins or receptacles  $h$ , arranged as will be more fully set forth hereinafter. The channel is provided with a conveyer or elevator  $b'$  in the nature of a chain or apron, any approved construction being used. Ordinarily this channel  $b$  is provided with a door which is closed as long as it is desired to feed the coke to the crushing apparatus and which is opened when it is desired to dump the coke into the yard, as indicated in Fig. 1. According to my invention, however, the coke is always lifted to the upper end of the channel  $b$ . The upper end of the channel  $b$  leads to the hopper  $z$ , connected by a tube  $y$  with three spouts or chutes  $c$  and  $g$ . One of these spouts  $c$  leads to the crushing apparatus  $d$  of an approved construction, while the other spouts  $g$  lead to receptacles or bins  $h$ . In the tube  $f$  is a valve or slide  $i$  for directing the coke either to the spout  $c$  or to the spouts  $g$ . When the valve or slide  $i$  is closed, as shown in Figs. 4 and 5, and the spout  $c$  is in the position shown in Figs. 3 and 5, the coke is directed to the crushing apparatus  $d$ . The crushed coke passes from the crushing apparatus  $d$  through the sieve  $e$  into the elevated receptacle  $f$ , from which it may be withdrawn in the usual way. When the valve or slide  $i$  is open, as shown in Figs. 6 and 7, and the spout  $c$  is elevated, as shown in dotted lines, Fig. 3, and full lines, Fig. 7, the coke escapes uncrushed into the receptacles or bins  $h$ , from which it may be discharged in the customary manner into railroad-cars or the like, sieves  $k$  being preferably disposed beneath each of the bins  $h$ .

In practice the respective demands for crushed and uncrushed coke are such that about one-third of the total production has to be crushed. It is also found that the night production is about equal to the day-time production. Thus if the coke is allowed to run during the night into the bins  $h$  one-half of the production will be stored in the form of uncrushed coke, and to make up the required two-thirds one-third of the day production—

that is, one-sixth of the total production—is added during the day, the remainder (which is one-third of the total production) being fed to the crusher *d*. The capacity of the bins *h* should therefore be equal to two-thirds of the total production. The number of bins *h* is of course immaterial, and a single bin with a single spout *g* might be employed.

The improved conveyer or coke-handling plant preserves the good quality of the coke and effects a considerable economy, as a double handling of the coke is avoided.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A coke-handling plant, comprising an elevated structure, a crushing apparatus in the upper part of the structure, a conveyer leading to the upper end of the structure, spouts at the upper end of the conveyer, and into which the conveyer discharges, one of the said spouts discharging into the crushing apparatus, and a valve for controlling the pas-

sage of the coke through said spouts, as set forth.

2. A coke-handling plant, comprising an elevated structure provided with a receptacle or bin *f* for the crushed coke, and a receptacle or bin *h* for the uncrushed coke, a crushing apparatus in the upper part of the structure and discharging in the receptacle or bin *f*, a conveyer leading to the upper end of the structure, spouts at the upper end of the conveyer and discharging into crushing apparatus and bin *h* respectively, and a valve for controlling the passage of the coke from the conveyer to the spouts, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERNST GEORG BERNHARD KÖRTING.

Witnesses:

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